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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------------|-----------------------------|
| 10/507,134 | 09/10/2004 | Tetsutaro Inoue | 0020-5296PUS1 | 2682 |
| 2292 7590 08/22/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747 | | | EXAMINER RICKMAN, HOLLY C | |
| | | | ART UNIT 1773 | PAPER NUMBER |
| | | | NOTIFICATION DATE 08/22/2007 | DELIVERY MODE ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/507,134

Applicant(s)

INOUE ET AL.

Examiner

Holly Rickman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 and 10-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. <u>20070816</u> |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>10/11/05;9/10/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 1-7 and 10-13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 6/5/07.
2. The examiner notes that the restriction requirement mailed on 4/5/07 mistakenly included claims 10-13 with grouping of Species II. Species II should have only included claims 8-9. The election of Species II, claims 8-9 was confirmed in an interview with John Bailey, Applicant's representative, on 8/15/07.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ochi et al. (US 6723415) in view of Tsukuda et al (US 6797381).

Ochi et al discloses a magnetic tape comprising a non-magnetic support, a magnetic layer containing magnetic powder which is formed on one side of a non-magnetic support, a

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primer layer containing non-magnetic powder which is formed between the non-magnetic support and the magnetic layer, and a backcoat layer containing non-magnetic powder which is formed on the other side of the non-magnetic support (see abstract).

Ochi et al teach the use of acicular Fe-based magnetic particles with an average major axis length of as low as 30 nm which falls within the claimed range of 20-60 nm (see col. 7, lines 10-35).

Ochi et al do not teach the coefficient of thermal expansion, coefficient of humidity expansion and edge weave amount of less than 0.8 microns.

Tsukuda et al teach substrates including aromatic polyamides and teach the desirability of minimizing the coefficients of thermal expansion and humidity expansion when the film is used as a magnetic media support (see col. 3 line 39; col. 4, lines 33-51). Specifically, the reference teaches a range of less than 4×10^{-5} /degree C for the coefficient of thermal expansion and a value of 10×10^{-5} or less for the humidity expansion coefficient. Therefore, it would have been obvious to one of ordinary skill in the art to optimize the thermal and humidity expansion coefficients of the structure taught by Ochi et al. in order to improve recording/reproducing characteristics as suggested by Tsukuda et al.

The examiner notes that Ochi et al acknowledge the desirability of reducing edge weave in order to limit the fluctuation of the output (col. 3, lines 24-32). Thus, it would have been obvious to one of ordinary skill in the art to minimize edge weave to as close to zero as possible in order to reduce the fluctuation of the output. Applicant's have not presented any evidence to suggest unexpected results associated with the claimed edge weave value of 0.8 microns or less.

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In the absence of such a showing, the examiner maintains that a prima facie case of obviousness has been made.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ejiri (US 6663955) is cited as art of interest.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (571) 272-1514. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Holly Rickman
Primary Examiner
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August 16, 2007